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## **RAPID WEIGHT GAIN IN THE FIRST WEEKS OF LIFE MAY BOOST HEART DISEASE RISK**

*Appropriate Medical Attention and Nutrition Needed to Protect Infants*

**CHICAGO, IL** – Low birth weight, especially in premature babies, has been associated with poor heart health in adulthood, resulting in the traditional view that rapid weight growth after birth may be protective. However, new evidence suggests that accelerated growth in preterm and term babies is associated with a range of diseases in later life, such as heart attack, diabetes and high blood pressure, according to a study being presented today at the American College of Cardiology’s 57<sup>th</sup> Annual Scientific Session.

Researchers found that rapid weight gain during the first two months of life is linked to 0.5mmHg increase in systolic blood pressure and increased arterial stiffness (a marker of damage to the arteries) at as early as 10 years of age.

“It appears there is a window early in life where programming for later cardiovascular disease can occur, and nutrition may play a significant role,” said Marietta Charakida, M.D., Ph.D., of University College London, and lead study investigator. “This study shows that targeting cardiovascular prevention in adulthood or even childhood may not be enough and nutritional strategies implemented early in life might offer additional benefit.”

More than 6,000 children aged 10 years (drawn from the Avon Longitudinal Study of Parents and Children) were studied. Blood pressure and body mass index (BMI) were assessed, as well as the stiffness of the arteries, which was measured in the brachial artery using high resolution ultrasound. Weight had been recorded at birth and within a period of two months. Change in

growth in the first two months was assessed as the change in weight between birth and the first two months of life.

Faster weight gain in the first two months was associated with increased systolic blood pressure at 10 years of age, regardless of sex, heart rate, BMI and lipoprotein (cholesterol) profile. In addition, faster weight gain was also associated with increased stiffening of the arteries (an early marker of arterial damage).

“This study provides evidence that accelerated weight gain in first few weeks of life might have a detrimental effect on cardiovascular health. Thus, medical attention, and appropriate nutrition early in life might be necessary to reduce this risk,” says Dr. Charakida.

Additional research is needed to assess whether this effect is aggravated by the accumulation of risk factors (e.g., high blood pressure, elevated cholesterol) as a result of the aging process, and whether lifestyle modifications can reverse these early influences. In addition, Dr. Charakida says it would be important to assess the mechanisms by which rapid weight gain within an infant’s first few weeks of life influence arterial disease progression.

*Dr. Charakida will present “Catch Up Growth Is Associated With Increased Blood Pressure and Arterial Stiffness in Childhood” on Sunday, March 30 at 10:00 a.m. in South Hall*

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The American College of Cardiology ([www.acc.org](http://www.acc.org)) represents the majority of board certified cardiovascular physicians in the United States. Its mission is to advocate for quality cardiovascular care through education, research, promotion, development and application of standards and guidelines- and to influence health care policy. ACC.08 is the largest cardiovascular meeting, bringing together cardiologists and cardiovascular specialists to share the newest discoveries in treatment and prevention, while helping the ACC achieve its mission to address and improve issues in cardiovascular medicine.